

SOV/68-59-1-8/26

AUTHORS: Bondarenko, I.P., Kamenetskiy, G.D. and Dovbnya, K.I.

TITLE: On the Choice of a Rational Shape of Lining of Coke-oven Doors (O vybore ratsional'noy konfiguratsii futerovki dverey koksovykh pechey)

PERIODICAL: Koks i Khimiya, 1959, Nr 1, pp 33 - 34 (USSR)

ABSTRACT: The service life of door linings made from various types and shapes of refractory bricks (shown in Figures 1-4) is compared. It is pointed out that bricks M119 and M120 shaped as in Figure 4, at present used in the Zaporozhe ovens, give the best service life of 3-4 years. This type of brick is recommended for future replacements and new batteries. In addition, it was found that the service life of 3-4 years for the above bricks is obtained when the beginning of the service coincides with the starting up of the new batteries. After replacement the service life decreases by about 50%. This is ascribed to the fact that when starting ovens, the doors are placed when the temperature of the oven is above 800 °C so that the lining bricks undergo an additional firing slowly attaining their operating temperature. It is therefore

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On the Choice of a Rational Shape of Lining of Coke-oven Doors

considered that a special camera for firing lining bricks  
with the door directly in the region of counterforts  
should be designed by Giprokoks.  
There are 4 figures and 1 table.

ASSOCIATION: Zhdanovskiy koksokhimicheskiy zavod  
(Zhdanovskiy Coking Works)

Card 2/2

KAMENETSKIY, G., inzhener; BITKIN, G., inzhener

~~XXXXXXXXXXXXXXXXXXXX~~

Measuring the volume of hydraulic fill. Rech. transp. 14 no. 4:  
13-14 Ap. '55. (MIRA 8:6)

(Hydraulic engineering)

BARSUKOV, A.A.; VASIL'YEV, N.V.; ZAYCHENKO, I.Z.; KAMENETSKIY, G.I., MAZYRIN,  
I.V.; MODEL', B.I., tekhnicheskii redaktor

[General reference data on hydraulic equipment used in modernizing  
machine tools] Obshchie spravochnye dannye po gidrooborudovaniyu,  
ispol'zuemomu pri modernizatsii metalloreshushchikh stankov. Moskva,  
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 151 p.  
(MLRA 10:3)

1. Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut  
metalloreshushchikh stankov.  
(Hydraulic machinery) (Machine tools)

KAMENETSKIY, G. I.

AID P - 5374

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 4/28

Author : Kamenetskiy, G. I.

Title : Longitudinal vibrations in machine tools with hydraulic drive

Periodical : Stan. i instr., <sup>27</sup><sub>9</sub>, 11-15, S 1956

Abstract : The author presents the analysis of longitudinal vibrations in machine tools. Vibrations developed in the basic rigid system and those additionally occurring in the control-regulating and directional mechanisms are analyzed. Twenty-three formulae, 4 graphs, 3 tables, 4 drawings, 1 oscillogram; 1 Russian reference (1948) and 1 German reference (1952).

Institution : None

Submitted : No date

NAMENETSKIY, G. I.

"Hydraulic amplifiers and drives."

Programmed Control of Metal Cutting Machines. report presented at  
All-Union Conference, Moscow, 13-16 Nov 1957  
Vestnik Ak. Nauk SSSR, 1958, No. 2, pp. 113-115, (author Kobrinskiy, A. Ye.)

KAMENETSKIY, G.I.

Hydraulic mechanisms for shockless gear switch. Stan. 1 instr. 29  
no. 2:29 F '58. (MIRA 11:3)

(Gearing) (Hydraulic control)

KAMENETSKIY, G.I.

Hydraulic control panels for transverse planing machines and  
slotting machines. Stan.i instr. 29 no.6:19-21 Je '58. (MIRA 11:7)  
(Machine tools--Hydraulic driving)



Kamenetskiy, G. I.

25(1)

PHASE I BOOK EXPLOITATION

SOV/2383

Akademiya nauk SSSR. Komissiya po tekhnologii mashinostroyeniya  
Avtomatizatsiya mashinostroitel'nykh protsessov. t. II: Privod  
i upravleniye rabochimi mashinami (Automation of Machine-build-  
ing Processes. Vol. 2: Drives and Control Systems for Process  
Machinery) Moscow, Izd-vo AN SSSR, 1959. 370 p. Errata slip  
inserted. 5,000 copies printed.

Ed.: V.I. Dikushin, Academician; Ed. of Publishing House: D.M.  
Ioffe; Tech. Ed.: I.F. Kuz'min.

PURPOSE: This book is intended for engineers dealing with auto-  
mation of various machine-building processes.

COVERAGE: This is the second volume of transactions of the second  
Conference on Overall Mechanization and Automation of Manufac-  
turing Processes held September 25-29, 1956. The present volume  
consists of three parts, the first dealing with automation of  
engineering measuring methods. The subjects discussed include  
automatic control of dimensions of machined parts, inspection  
methods for automatic production lines, in-process inspection

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Automation of Machine-building (Cont.)

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devices, application of electronics in automating linear measuring processes, and machines for automatic inspection of bearing races. The second part deals with automatic drives and control systems for process machinery, including application of digital computers in the control of metal-cutting machine tools, reliability of relay systems, application of gas-tube frequency converters in the control of induction motor speeds, magnetic amplifiers and their use in automatic systems, hydraulic drives, and ultrasonic vibrators. Part three deals with mechanisms of automatic machines and automatic production lines. The subjects discussed include linkage, indexing, and Geneva-wheel-type mechanisms, friction drives, automatic loading devices, diaphragm-type pneumatic drives, various auxiliary devices for automatic production lines, and methods of design and accuracy of cams. No personalities are mentioned. There are no references.

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ENGINEERING MEASUREMENT

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~~Card 5/7~~

ZAYCHENKO, I.Z.; MYSHLEVSKIY, L.M.; ZAYTSEVA, K.V.; KAMENETSKIY,  
G.I.; MAZYRIN, I.V. [deceased]; SHCHERBAKOV, V.I.; LOZHKIN, O.V.;  
CHIGAREVA, E.I., red.; KOVAL'SKAYA, I.F., tekhn. red.

[Development of the designs of hydraulic and pneumatic equipment and of lubrication and filtration systems for machine tools abroad] Razvitie konstruktsii gidravlicheskogo i pnevmaticheskogo oborudovaniia, smazochnykh i fil'truushchikh ustroistv metallo-rezhushchikh stankov za rubezhom; obzor. Moskva, TSINTIMASH, 1961. 101 p. (MIRA 16:5)

1. Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut metallo-rezhushchikh stankov.

(Machine-tools--Design and construction)

S/121/61/000/005/003/005  
DO40/D112

AUTHOR: Kamenetskiy, G.I.

TITLE: Tracing hydraulic valves for program-controlled machine tools

PERIODICAL: Stanki i instrument, no. 5, 1961, 13-18

TEXT: The described G68-1 (G68-1) valves, developed at ENIMS, are designed for program-controlled, copying and some other machine tools. Detailed engineering information is given. The valve (Fig. 1 and 2) is two-staged, electrically controlled. The first stage comprises an electro-mechanical actuator and a needle valve, the second a spring-loaded distribution valve. The efforts produced by the mobile system are proportional to the voltage applied to the coil terminals. Existing actuators of this type are described by V.A. Khokhlov (Ref. 2: "Avtomatika i telemekhanika", vol. XVIII, no. 10, AN SSSR, Moscow, 1957) and in an English source (Ref. 3: "Applied Hydraulics and Pneumatics", no. 2, 1959). The G68-1 differs from them in that it produces a constant effort that does not depend on the coil position and its valve needle; its pressure is less dependent on the oil viscosity and temperature, or on the valve motion speed; it has low susceptibility to contamination of oil. Vibration is eliminated

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Tracing hydraulic valves...

in the major valve, and starting delay is not above 0.004 sec despite the long travel of the needle. The electromechanical actuator (Fig. 2) has the following elements. A coil (19) with a textolite frame, with leads in the center and at the ends of the winding (which makes the actuator applicable in simple and in differential control systems), moving in the field of a permanent magnet (22) made from a special alloy; the coil winding stays within the uniform portion of the magnetic field and the electromagnetic forces are proportional to the voltage on the terminals and independent from the coil movements. A pointed needle (16) in bushings (18) closes a calibrated hole in a diaphragm (15) thus changing pressure in the system; sinusoidal 50-cycle current equal to about 0.05 - 0.1 of the maximum control current vibrates the needle axially and so eliminates the effect of friction. A deflector (17) prevents air from being sucked into the valve and solid particles in the oil from getting into the needle bushing. A maximum of 40g<sub>mwt</sub> is needed for the needle valve control in a static state. A soft spring (20) balances the oil pressure at zero (no current in the coil) by 6 kgf/cm<sup>2</sup>. A screw (21) is provided for the initial adjustment of the spring (20). The needle valve has no sealings and can be used in the vertical position only. Pressure increase

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D040/D112

Tracing hydraulic valves...

in the first stage displaces the valve in the second. A spring (1) makes the valve output energy proportional to the electric input signal. A bushing (11), pressed into the casing (5), has bores (10) for oil from the pump, (6) for drain, and (9) for oil feed to the work cylinder spaces. The two bores (6) are connected. The valve (7) has calibrated grooves (8) on its edges (their dimensions are selected in accordance with pressure in the system and work load). The rigidity of the spring (1) under the valve is 2.25 kgf/mm. The valve moves upon pressure changes in the space (13) and changes the cross sections of the grooves (8), creating a pressure gradient (as in usual tracing valves). The valve (7) is rotary, which prevents it from unilateral pressure against the casing and counteracts jamming due to solid particles in the oil. A turbine (4) rotates the valve (7) and is itself rotated by the oil flowing from the draining main through a radial (24) and one axial (23) bore, and on into opposite radial bores (3). The pressure loss in the turbine is 1 kgf/cm<sup>2</sup>, and the latter's velocity about 300 r.p.m. (friction may also be eliminated by swinging the valve by electrically-driven cam mechanisms or two electro-magnets, but the turbine is simpler and more dependable). A stop (12)

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Tracing hydraulic valves...

and a washer (2) limit the valve motion. Its travel from the central to the limit position is 1.8 mm in 0.06 sec (can be reduced by increasing the needle diameter and correspondingly faster oil flow). The control signal power changes in inverse proportion to the square of the time of motion of the valve. Valves with grooves (8) reverse more than twice faster than valves closing apertures completely. A special compensator in the form of bores (14) is provided for reducing the effect of the oil temperature. The number, diameter and length of the bores are selected so as to make the friction losses of oil in them approximately equal the friction loss in the drain line. Pressure on both ends of the valve (7) changes with temperature simultaneously and approximately equally. The valve is mounted in the hydraulic system without the use of pipes (for convenience). The casing (5) can accommodate a standard ПГ54-12 (PG54-12) valve. The technical specification of four "G68-1" valves is given (Table 1):

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Tracing hydraulic valves...

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	<u>G68-11a</u>	<u>G68-11</u>	<u>G68-12</u>	<u>G68-13</u>
Maximum work pressure .. kgf/cm <sup>2</sup>	50	50	50	50
Maximum power from the slide valve, kw	0.25	0.5	1.0	2.0
Oil flow at maximum power .. liter/min	5	8	18	35
Maximum pump power .. kw	0.62	1.25	2.5	5.0
Maximum control signal power at maximum slide valve power in simple control systems .. mw	125	135	145	170
Maximum needle valve pressure .. kgf/cm <sup>2</sup>	8	8	8	8
Oil flow through the needle valve, liter/min	3.0	3.0	3.0	3.0

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Tracing hydraulic valves...

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D040/D112

The dependence of the pressure gradient between the spaces in the actuator on the general pressure ( $\text{kgf/cm}^2$ ) in the system can be expressed as

$$P_{gr} = \eta_{hyd} P_{tot} \quad (1)$$

where  $P_{gr}$  is the pressure gradient between spaces;  $P_{tot}$  - the general pressure;  $\eta_{hyd}$  - hydraulic efficiency of the slide valve, showing what portion of pressure applied to the slide valve is utilized by the hydraulic drive. The formulae for the oil flow (Q) and the valve power (N) are

$$Q = C \frac{(S + 0.3)}{S_{max}} \sqrt{P_{tot}} \cdot \sqrt{1 - \eta_{hyd}}, \text{ liter/min} \quad (2)$$

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$$N = \frac{Q P_{gr}}{612} = \frac{C}{612} \frac{(S + 0.3)}{S_{max}} \sqrt{P_{tot}^3} \sqrt{\eta_{hyd}^2 - \eta_{hyd}^3}, \text{ kw} \quad (3)$$

where C is a proportionality coefficient depending on the width of the grooves (8); S - slide valve displacement from its zero position, in mm;  $S_{max}$  - the maximum slide valve displacement, in mm; 0.3 - the opening value of the slots at mid position of the slide valve. As can be calculated by the formula (3), the maximum output power of the valve is at  $\eta_{hyd} = \frac{2}{3}$ , i.e. at loss in the grooves (8), equal to  $\frac{1}{3} P_{tot}$ . The dependence between the output power N kw, displacement S mm of the slide valve from the mid position, pressure  $P_{tot}$  (kgf/cm<sup>2</sup>) in the system, coefficient  $\eta_{hyd}$ , and the voltage U on the terminals of the coil (19) is expressed

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Tracing hydraulic valves...

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by the formula

$$U = 2S + \frac{3.5N}{\sqrt{P_{tot}}} \sqrt{\frac{1}{\eta_{hyd}^2} + \frac{1}{\eta_{hyd}}} \text{ volt,} \quad (6)$$

where the figures 2 and 3.5 are coefficients determined experimentally. In a differential control system and with a.c. control current the control signal at static state in the system will be higher than in a simple control system (Data in table 1), but it must not exceed 1 w (in order not to overheat the coil). Pressure in the main hydraulic system is maintained by a safety valve (29) (Fig. 2). A separate pump (28) is provided for the valve. The control system has no safety valve, and pressure increases with the effort developed by the electro-mechanical actuator. A valve (25) is provided for preventing air from getting into the system, for the needle valve has no sealing. The valve (25) is shown in a separate drawing (Fig. 7). The piston is covered with oilproof rubber. The valve shown in dotted lines (26) is a relief valve that is to be used in systems where the pump capacity exceeds the total oil flow in all valves connected to one pump, i.e. it is designed for maintaining the turbines pressure

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Tracing hydraulic valves...

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D04G/D112

at 1 kgf/cm<sup>2</sup> (other valves than the G68-1 can be used if a relief valve (29) is placed in the system and not on the actuator). The valve control systems must be independent, i.e. a standard twin blade pump can be used for two valves, after a slight design change. The described valves (with feed from a twin pump) are used in a program-controlled vertical 6M42<sub>np</sub> (6M42<sub>pr</sub>) milling machine, where the program control of two motions is performed by two valves - longitudinal table motion and cross carriage slide motion. The milling machine was tested, and it was stated that there is no need for feedback for the work element motion speed, and that it is better to control the motion speed by lag from the programmed speed. The needle valves of the actuators can be fed from the main pump through a set of diaphragms if the machine has more than two work elements. The diaphragm set design is illustrated (Fig. 8) (where (1) are diaphragms, (2) spacing shims sealed with rubber rings (3); oil inlet is through the cover (4) to all bores in the casing (5); (6) flanges joining the valves). The system illustrated in Fig. 2 is designed for program control. If the G68-1 valves are used in copying machines, the usual slide valve (coupled by levers with the tracer) is replaced by an electric feeler, and its

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Tracing hydraulic valves...

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D040/D112

amplified signals are transmitted to the valve. A copying machine tool hydraulic system is analogous with the system in Fig. 2 but includes the usual mechanical feedback of copying machines. The G68-1 valves may be used also in boring machines with hydraulic drive for the tool. A tachometer generator must then be connected to the hydraulic drive, and feedback provided between the tachometer generator and the valve. The valves make the hydraulic system simpler and the tool motion more steady. There are 9 figures, 2 tables and 3 references; 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the latter publication reads as follows:  
"Applied Hydraulics and Pneumatics", No 2, 1959.

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S/121/62/000/001/001/004  
D040/D113

AUTHOR: Kamenetskii, G.I.

TITLE: Hydraulic torque amplifiers

PERIODICAL: Stanki i instrument, no. 1, 1962, 3-8

TEXT: The design, operation and theoretical basis of MF18-1 (MG18-1) hydraulic torque amplifiers (Fig. 1), developed by ENIMS for application in machine tools, are described in detail. The components are an MF15 (MG15) hydraulic axial-piston drive, previously described (Ref. 1: Kamenetskii, G.I., "Stanki i instrument", no. 5, 1959), and a control valve consisting of a bushing (1) and a ground-in cock (2) with four slots (3) that coincide in sequence with ducts (4) and (5), and four blind slots. Oil is fed and removed through two opposite bores (7) and flows in annular grooves on the bushing and the valve casing. A joint (10) securely connects the bushing with the amplifier shaft (8) and compensates for misalignments. The maximum turn angle is  $\pm 35^\circ$ . Air is drained from the valve top. The torque on the output shaft rises with the lag angle  $\delta$  seen in the schematic diagram (Fig. 3) and drops with increasing

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ACC NR: AP7006950

SOURCE CODE: UR/0413/66/000/021/0211/0211

INVENTOR: Kamenetskiy, G. I.; Zaytseva, K. V.

ORG: none

TITLE: Hydraulic feed-control device. Class 59, No. 188306 [announced by the Scientific Research Institute of Experimental Metalcutting Lathes (Eksperimental'nyy rauchno-issledovatel'skiy institut metallo-rezhushchikh stankov)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 211

TOPIC TAGS: hydraulic device, ~~pump~~, hydraulic pump, ~~axial pump~~ *ENGINE PISTON, AXIAL PUMP*

ABSTRACT: An Author Certificate has been issued for a hydraulic feed-control device for an axial-piston pump with variable piston stroke. It contains a double-arm lever connected with the pump's control element, actuated by hydraulic control cylinders and provided with a shoulder which interacts with controllable stops in the pump's housing to limit the maximum supply. To assure a simultaneous uniform change in feeding when reversing, a controllable regulating spindle in the housing interacts through the stops with the evolvent surface of the lever's shoulder. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: none

[WA-98]

Card 1/1

UDC: 621.66-543.3-551.4:621.65

[GE]

KAMMENTSTI, T. T.

Red Inst. of Epidemiol. and Microbiol., (-1944-).

Branch State Hospital for Childrens' Diseases. (-1944-).

"Experiment with Employment of Tartaric Acid in both Diphtheritic Patients and Healthy Bacilli - Carriers."

Zhur. Mikrobiol., Epidemiol., i Imunobiol., No. 6, 1944.

PESHKOVSKIY, L.M.; KLEYN, G.N., prof., doktor tekhn. nauk, retsenzent;  
KARAMYSHEV, I.A., nauchn. red.; KAMENETSKIY, I.I., nauchn.  
red.; AKATOVA, V.G., red.; SHVETSOV, S.V., tekhn. red.

[Designing footings and foundations for public and industrial  
buildings] Raschety osnovanii i fundamentov grazhdanskikh i  
promyshlennykh zdaniy. Petrozavodsk, Rosvuzizdat, 1963.283 p.  
(MIRA 17:2)

MEDKOV, Ye.I., prof.; KAMENETSKIY, I.I., otv. za vyp.

[Lectures for the course "Soil mechanics, footings, and foundations," the section "Principles of soil resistance under stress"] Lektsii po kursu "Mekhanika gruntov, osnovaniia i fundamenty, razdel "Osnovnye zakonomernosti soprotivleniia gruntov pod nagruzkami" (uchebnoe posobie). Moskva, Mosk. in-t inzhenerov zhel-dor. transp., 1962. 94 p. (MIRA 17:3)

KAMENETSKIY, I. M.

"On the Smallest Interpolation and the Proceeding," Dokl. AN SSSR, 25,  
No.5, 1939

Voronezh State U.

KAMENETSKIY, I. M.

"Concerning Interpolation by Means of Derivatives and the Correspondent  
Processes of Interpolation," Dokl. AN SSSR, 26, No.3, 1940

Voronezh State U.

KAMENETSKIY, I. M.

"Concerning the Indicator of the Hypothesis of a Complete Function of the First Order and Concerning the Distribution of the Singularities of a Function Represented by the Associated Series of Taylor," Dokl. AN SSSR, 26, No.6, 1940



MOROZOV, V.I.; VORONICHEV, N.M.; NAUDIN, Yu.V.; GARMAZA, V.A.; MEDVEDEV, G.I.;  
KAMENETSKIY, Y.M.; IZOKH, V.V.; BARASHKOV, V.D.; EMPARAPULO, V.Kh.;  
RAYEVSKIY, N.P.; SHASHKOV, Yu.M.; GRISHIN, V.P.; SMYSLOV, I.I.;  
ROMANENKO, Yu.M.; SAKHAROV, B.B.

Innovations. Avtom. i prib. no.2:61-62 Ap-Je '65. (MIRA 18:7)

KAMENETSKIY, I.S.

ORECHKIN, B.S., kandidat meditsinskikh nauk, starshiy nauchnyy sotrudnik;  
KAMENETSKIY, I.S., ordinator

Immediate results of simultaneous therapy of syphilis with penicillin  
and other antisyphilis drugs. Vest. ven. i derm. no.6:29-33 N-D '54.

1. Iz otdela sifilidologii (zav.-prof. I.D.Parkel') Odesskogo nauchno-  
issledovatel'skogo kozhno-venerologicheskogo instituta imeni Ye.S.

Glavche (dir.-nauchnyy sotrudnik B.I.Shpolyanskiy)

(SYPHILIS, therapy

penicillin with oxophenarsine & bismuth)

(PENICILLIN, ther. use

syphilis, with oxophenarsine & bismuth)

(OXOPHENARSINE, ther. use

syphilis, with penicillin & bismuth)

(BISMUTH, ther. use

syphilis, with penicillin & oxophenarsine)

*KAMNETSKIY, I.S.*  
ORECHKIN, E.S., kandidat meditsinskikh nauk; KAMNETSKIY, I.S., ordinator

Further observations on the simultaneous treatment of syphilis with penicillin, arsenic, and bismuth [with summary in English]. Vest. dermat. i ven. 31 no.3:24-27 My-Je '57. (MIRA 10:11)

1. Iz otdela sifilidologii (sav. - kandidat meditsinskikh nauk E.S.Orechkin) Odesskogo nauchno-issledovatel'skogo kozhno-venericheskogo instituta vendispensera (glavnyy vrach I.M.Koltun)

(OXOPHENARSINE, therapeutic use,

syphilis, with bismuth & penicillin (Rus))

(BISMUTH, therapeutic use,

syphilis, with oxophenarsine & penicillin (Rus))

(PENICILLIN, therapeutic use,

syphilis, with bismuth & oxophenarsine (Rus))

(SYPHILIS, therapy,

bismuth, oxophenarsine & penicillin (Rus))

KAMENETSKIY, I.S.; GOL'DMAN, M.I.

Complications of gonorrhea in males with reference to modern methods of treatment. Vest. dermat. i ven. 32 no.6:59-61 N-D '58. MIRA 12:1)

1. Iz Odesskogo oblastnogo kozhno-venerologicheskogo dispansera (glavnyy vrach I.M. Koltun).

(GONORRHEA, compl.

(Rus))

GUREVICH, Yu.N.; KAMENETSKIY, I.S.

Reiter's syndrome treated with corticosteroids. Vest.derm.1  
ven. no.11:67-69 '61. (MIRA 14:11)

1. Iz Odesskogo oblastnogo kozhno-venerologicheskogo dispansera  
(glavnyy vrach I.M. Koltun).  
(REITER'S DISEASE) (ADRENOCORTICAL HORMONES--THERAPEUTIC USE)

KAMENETSKIY, I. Ya.

PHASE I BOOK EXPLOITATION

SOV/3838

Bliskunov, N. A., and I. Ya. Kamenetskiy

Tekhnologiya proizvodstva elektrovakuumnykh priborov, Ch. 1: Izgotovleniye katodov, podogrevateley, i gazopoglotiteley (Production Technology of Electro-Vacuum Devices, Pt. 1: The Manufacture of Cathodes, Heaters, and Gas Absorbers) Leningrad, Gosenergoizdat, 1959. 219 p. Errata slip inserted. 10,000 copies printed.

Ed.: S. A. Obolenskiy; Tech. Ed.: O.S. Zhitnikova.

PURPOSE: This book is intended for persons working in the electro-vacuum industry, and can also be used by students of schools of higher education studying the technology of electro-vacuum devices.

COVERAGE: The book explains the technological principles of the manufacture of cathodes, heaters, and gas absorbers of modern electron tubes. The authors thank R. A. Gavrilov, S. A. Obolenskiy, R. A. Nilender, and B. N. Mozhzhevelov. There are 10 references: 3 Soviet and 7 English.

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Production Technology (Cont.)

80V/3838

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7-14-60

Card 4/4

KAMENETSKIY, I.Ya.

Effect of adaptation to high-mountain conditions and the action under these conditions of Dorogov's antiseptic-stimulant ASD on the healing time of skin wounds in white mice. Trudy KirgNOAGE no.2:36-39 '65.

Effect of adaptation to high-mountain conditions and the action under these conditions of Dorogov's antiseptic-stimulant ASD on the healing time of skin wounds in white rats. Ibid.:39-42 (MIRA 18:11)

1. Iz kafedry gistologii (zav. - prof. A.A.Braun) Kirgizskogo gosudarstvennogo meditsinskogo instituta.

L 8498-6 (A) EWT(m)/EWP(t)/EWP(t)/EWP(b) JD/RN

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AUTHORS: Ardy, D. I.; Kamenetskiy, I. Ya.; Smirnova, A. P.; Sergeyeva, A. A.;  
Ponomareva, V. M.; Golubeva, A. Y.; Luk'yanov, N. P.; Yeremina, Ye. N.; Sivograkova,  
K. A.; Kinter, I. P.; Shalina, V. P.

ORG: none

TITLE: Surfacing for metallic and reinforced concrete decks. Class 39, No. 175643  
/announced by Organization of the State Committee on Ship Construction SSSR  
(Organizatsiya gosudarstvennogo komiteta po sudostroyeniyu SSSR)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 64

TOPIC TAGS: polymer, copolymer, rubber, mineral filler, pigment, metal surfacing,  
reinforced concrete, ship component, SYNTHETIC RUBBER

ABSTRACT: This Author Certificate presents a surfacing material for metallic and  
reinforced concrete decks. The surfacing material is based on a binding polymer  
and on mineral fillers and pigments. To increase its resistance to abrasion and  
corrosion and to reduce its slipperiness, a copolymer of styrole with nitrylacrylic  
acid and with butylacrylic rubber is used as the binding polymer.

SUB CODE: 11/ SUEN DATE: 12Mar64

UDC: 678.746.2-139.678.046.3 678.047

BVK  
Card 1/1

KAMENETSKIY, Leonid Borisovich; LIPSKAYA, V.F., red.; GORYACHKINA,  
R.A., tekhn. red.

[Manual for the bulldozer operator] Pamiatka mashinistu  
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(MIRA 16:8)

(Bulldozers)

KAMENETSKIY, Leonid Borisovich; LAPSKAYA, V.F., red.

[Handbook for a bitumen-boiler operator] Pamiatka mashinistu bitumnogo kotla. Moskva Transport, 1965. 36 p.  
(MIRA 18:6)

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Eliminate the shortcomings of chronometric observations in coal  
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(Coal mines and mining--Research)

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(Chelyabinsk Basin--Coal miners)  
(Wages)

KAMENETSKIY, L.Ye.

Integrated work organization in the Chelyabinsk Coal Basin.  
Izv.vys.ucheb.zav.; gor.zhur. no.4:51-56 '58. (MIRA 11:11)

1. Leningradskiy gornyy institut.  
(Chelyabinsk Basin--Mine management)



KAMENETSKIY, L.Ye., kand.ekon.nauk

Standards for calculating the amount of other expenditures during  
the designing of open pit coal mines. Shakht.stroi. 7 no.5:  
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1. Gosudarstvennyy institut po proyektirovaniyu shakht.

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Using linear programming methods in planning the expansion of the Kansk-  
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(MIRA 17:12)

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2. Leningradskiy vychislitel'nyy tsentr (for Korbut).

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(Lugansk Province--Community life)

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Determining the efficient structure for the processing of slag by  
linear programming. Stroi.mat. 10 no.8:14-15 Ag '64. (MIRA 17:12)

MAKARETSKIY, N. G.

"Electric Power Supply from Public-Service Stations in Russia in the 90s of the 19th Century." Thesis for degree of Cand. Technical Sci. Sub 6 Oct 49. Power Engineering Inst. imeni G. M. Krzhizhanovskiy, Acad Sci USSR.

Summary 32, 13 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva. Jan-Dec 1949.

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Gosenergoizdat, 132 pp, 1951.

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KAMENETSKIY, M.O.

BERGER, A.Ya., professor (Leningrad); KAMENETSKIY, M.O., inzhener  
(Leningrad).

P.P.Kopniaev's role in the activities of the Russian school of  
electrical engineering. Elektrichestvo no.1:71-72 Ja '54.  
(MIRA 7:2)  
(Kopniaev, Pavel Petrovich, 1867-1932) (Electric engineering)



AUTHOR KAMENETSKIY M.O. PA - 3103  
 TITLE Determining Feed in Currents During Faults in Low Voltage Circuits.  
 (Opredeleniye tokov podpitki pri korotkikh zamykaniykh v setyakh niz-  
 kogo napryazheniya -Russian)  
 PERIODICAL Elektrichestvo, 1957, Vol 7 Nr 5, pp 40 - 45, (U.S.S.R.)  
 Received 6/1957 Reviewed 7/1957  
 ABSTRACT The experiments were carried out with a circuit of 380 V and the overcon-  
 sumption of the asynchromotors which were used was determined. With a cir-  
 cuit voltage up to 1000 V and a corresponding fall of voltage the asynch-  
 ron-motors emit a current to the short circuit point for a certain time.  
 The purpose of this particular work was to analyse the fading away of this  
 short circuit current. Parallel to this experiment another calculation was  
 carried out whereby the nominal output of the motore basically determines  
 the amount of the load before the short circuit, and the concept of "the  
 specific false output" (the comparison of the false output to the self sus-  
 pended output) was used by S.A.Rinkevich. It is demonstrated that the spe-  
 cific false output can also be analytically determined. The formula for  
 the fading away of the short circuit current is derived. The experiments  
 and the calculations differentiated themselves at 10 - 15% and both con-  
 firmed that with the correct evaluation of the circuit voltage and of the  
 nominal motor output, the calculation results are thoroughly reliable for  
 those cases where the short circuit results in the top portion of the low  
 voltage circuit. With medium or greater distance of the short circuit points,

Card 1/2

KAMENETSKIY, M.O.

105-9-19/32

**AUTHOR:** Kamenetskiy, M.O., Candidate of Technical Sciences,  
(Leningrad)

**TITLE:** E. Arnold's Activity in Russia (Dayatel'nost' E. Arnol'da v Rossii)

**PERIODICAL:** Elektrichestvo, 1957, Nr 9, pp. 65-68 (USSR)

**ABSTRACT:** 1856 - 1911. From 1874 - 1878 Engelbert Arnold studied at Zurich at the Technical High School, faculty for mechanics, and worked as engineer at Leipzig and Offenbach on Main. In 1880 he was appointed assistant at the Technical High School of Riga. He obtained the venia legendi on September 22, 1883 on "Transfer of Electrical Energy". In 1886 electrotechnics was introduced as an independent compulsory subject and Arnold was given the chair for this subject. A special electrotechnical laboratory was established at his initiative. The Technical High School at Riga was one of the first in the world and the first in Russia at which electro-engineers were trained. In 1882-1892 Arnold was a member of the editorial office of the "Riga Industrial Newspaper". At Riga he wrote his two basic works "Details of Machines" and "Armature Windings of Direct Current Dynamos". From 1891 - 1894 he was head of the electrotechnical department of the Oerlikon-Works at Zurich and from 1894 - 1911 he held the chair at Karlsruhe Technical High School. From 1896 - 1898 the Institute for Electrotechnics was established at Karlsruhe under his management. From 1906 -

Card 1/2

E. Arnold's Activity in Russia

105-9-19/32

1907 he was rector of the Technical High School at Karlsruhe.  
There is 1 figure and 1 Slavic reference.

AVAILABLE: Library of Congress

Card 2/2

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nauchnyy red.; VOROB'YEV, G.S., red.izd-va; GURDZHIYEVA, A.M.,  
tekhn.red.

[Development of electric engineering in the U.S.S.R.] Razvitie  
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(MIRA 13:4)

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VYACHESLAVOV, P.M., kand. khim. nauk, dots., red.; GRILIKHES, S.Ya.,  
red. vypuska; YAMPOL'SKIY, A.M., inzh. red.; ONISHCHENKO, R.N., red.  
izd-va; BARDINA, A.A., tekhn. red.

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(MIRA 14:12)

(Electroplating)

SHNEYDER, M.S.; KAMENETSKIY, M.S.

Secondary hypertrophic pulmonary osteoarthropathy (Marie-Bamberger syndrome); clinical characteristics and role in the diagnosis of pulmonary cancer. Terap.arkh. 33 no.3:41-46 Mr '61. (MIRA 14:3)

1. Iz kliniki propedevticheskoy terapii (i.o. zav. - kandidat meditsinskikh nauk M.S. Shneyder) sanitarno-gigiyenicheskogo i pediatricheskogo fakul'tetov Stalinskogo meditsinskogo instituta.  
(ACROMEGALY) (LUNGS—CANCER)

KAMENETSKIY, M.S.

Evaluation of X-ray methods of examining external respiration. Vrach. delo no.8:73-75 Ag'63. (MIRA 16:9)

1. Rentgenovskoye otdeleniye Vtoroy gorodskoy bol'nitsy  
Donetskogo metallurgicheskogo zavoda.  
(X RAYS) (RESPIRATION)

KAMENETSKIY, M.V.

137-1958-1-219

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 34 (USSR)

AUTHOR: Kamenetskiy, M. V.

TITLE: ~~An Investigation of the Ternary System NaCl-KCl-TiCl<sub>3</sub>~~  
(Issledovaniye troynoy sistemy NaCl - KCl - TiCl<sub>3</sub>)

PERIODICAL: Nauchno-tekhn. inform. Byul. Leningr. politekhn. in-t, 1957,  
Nr 3, pp 3-12

ABSTRACT: The binary systems NaCl-TiCl<sub>3</sub> and KCl-TiCl<sub>3</sub> are studied. It is shown that the system KCl-TiCl<sub>3</sub> contains a stable chemical compound 3KCl · TiCl<sub>3</sub>, melting temp. 760°. In the interval investigated, this system has a eutectic of the composition: KCl 85.2 mol. - percent, TiCl<sub>3</sub> 14.8 mol. - percent, melting temperature 676°. The composition of a second eutectic was determined by extrapolation. It consists of 66.4 mol. - percent KCl and 33.6 mol. - percent TiCl<sub>3</sub>, melting temperature 595°. The system NaCl-TiCl<sub>3</sub> is eutectic, NaCl 77.6 mole - percent, TiCl<sub>3</sub> 22.4 mole - percent melting temperature 540°. It is shown that in the NaCl-KCl-TiCl<sub>3</sub> system the minimum melting temperature (590° approximately) is that of the following mixture (in mol. - percent): NaCl 40, KCl 48, TiCl<sub>3</sub> 12. The existence

Card 1/2



137-1958-1-219

An Investigation of the Ternary System  $\text{NaCl-KCl-TiCl}_3$

of a chemical compound  $3\text{KCl} \cdot \text{TiCl}_3$  is proved. It is suggested  
that there is a compound of the composition  $3 \text{NaCl} \cdot \text{TiCl}_3$ .  
N. P.

1. Metal chloride compounds—Analysis
2. Metal chloride compounds  
—Properties

Card 2/2

AUTHOR: Kamenetskiy, M. V.

SOV/163-58-2-17/46

TITLE: The Interaction of Metallic Titanium With Its Chlorides in the Melt of Alkali Metallic Chlorides (Vzaimodeystviye metalli-cheskogo titana s yego khloridami v rasplavakh khloridov shchelochnykh metallov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 2, pp. 104-111 (USSR)

ABSTRACT: The interaction of metallic titanium and its 2- and 3-valent chlorides in the melt of alkali metallic chlorides was investigated. This investigation is of importance for an electrolytic production of titanium metal from the alkali melt. The decomposition of  $TiCl_3$  was investigated. The experiments on this decomposition were carried out in a potassium chloride melt and in an equimolar melt of NaCl and KCl in a quartz tube. The determination of the composition of 2- and 3-valent titanium chloride in the salt melts investigated was carried out by means of the titration of iron-(II)-chloride. It is shown that at temperatures of 675-900°C the equation  $2 TiCl_3 + Ti \rightleftharpoons 3 TiCl_2$

Card 1/3

The Interaction of Metallic Titanium With Its Chlorides in the Melt of  
Alkali Metallic Chlorides SOV/163-58-2-17/46

tends to the side of  $TiCl_2$ .  $TiCl_2$  on the other hand decomposes further into  $TiCl_3$ . The decomposition takes place according to a complex reaction scheme. The dependence of the solubility of titanium on the anodic current density was investigated. At lower current densities the process of dissolution mainly takes place under the formation of  $TiCl_2$ . At a current density of  $0,35 \text{ A/cm}^2$ , for instance, the amount of  $TiCl_2$  is almost twice that of  $TiCl_3$ . With an increase of the current density the amount of  $TiCl_3$  increases, and at a current density of  $1,3 \text{ A/cm}^2$  mainly  $TiCl_3$  is formed at the anode. There are 2 figures, 5 tables, and 8 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Polytechnical Institute)

Card 2/3

KAMENETSKIY, M. V.: Master Tech Sci (diss) -- "Investigation of the physicochemical properties of fused titanium chlorides in alkali-earth metals". Leningrad, 1959. 14 pp (Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies (KL, No 13, 1959, 105)

18.3100

77728  
SOV/149-60-1-17/27

AUTHORS: Kamenetskiy, M. V., Kostyukov, A. A., Popov, A. N.

TITLE: Ternary System of Potassium, Magnesium, and Titanium Chlorides

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Tsvetnaya metallurgiya, 1960, Nr 1, pp 119-122 (USSR)

ABSTRACT: Equilibrium diagrams of the above ternary system were investigated as an area of interest for titanium electro-metallurgy. Previous work on this subject by A. I. Ivanov (DAN SSSR, Vol 86, Nr 3, 539, 1952) and M. V. Kamenetskiy (Tsvetnyye metally, Nr 2, 39, 1958) is cited. The study was based on cooling curve recordings of the system, with composition expressed in molar percentages. Eleven cross sections of the diagram were investigated as shown in Fig. 1. As melts high in  $TiCl_3$  content could be studied insofar as saturated by this component, the position of monovariant line  $e_2E_2$  (see Fig. 1) is determined tentatively. A short description of the cross

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Ternary System of Potassium, Magnesium,  
and Titanium Chlorides

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SOV/149-60-1-17/27

sections is given as follows: (I) (90% KCl + 10% MgCl<sub>2</sub>)

TiCl<sub>3</sub> crosses the crystallization field boundaries of KCl, 3KCl · TiCl<sub>3</sub>, and TiCl<sub>3</sub> (7.9 and 28.6%) at 615 and 590° C, respectively. (II) (80% KCl + 20% MgCl<sub>2</sub>) · TiCl<sub>3</sub> crosses the same boundaries at 540° C (4.5% TiCl<sub>3</sub>) and 560° C (23% TiCl<sub>3</sub>). (III) (75% KCl + 25% MgCl<sub>2</sub>) · TiCl<sub>3</sub> crosses the same boundaries at 490° C (3% TiCl<sub>3</sub>) and 540° C (20% TiCl<sub>3</sub>). (IV) (67% KCl + 33% MgCl<sub>2</sub>) · TiCl<sub>3</sub> crosses boundaries of fields of variable composition phase crystallization A, KCl · MgCl<sub>2</sub>, 3KCl · TiCl<sub>3</sub> and TiCl<sub>3</sub> at 430° C (1% TiCl<sub>3</sub>); 477° C (6% TiCl<sub>3</sub>); and 470° C (15% TiCl<sub>3</sub>). (V) (60% KCl + 40% MgCl<sub>2</sub>) · TiCl<sub>3</sub> crosses one field boundary KCl · MgCl<sub>2</sub> and TiCl<sub>3</sub> at 388° C

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Ternary System of Potassium, Magnesium,  
and Titanium Chlorides

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SOV/149-60-1-17/27

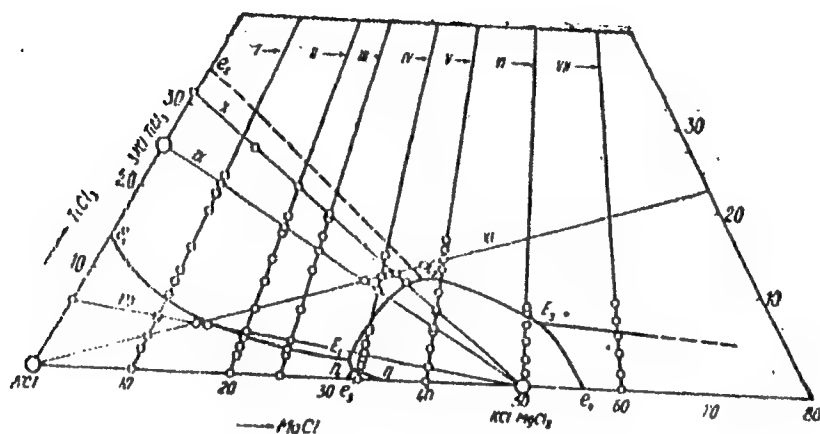


Fig. 1. Concentration triangle of  $KCl-MgCl_2-TiCl_3$  showing cross sections and points of investigated alloys.

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Ternary System of Potassium, Magnesium,  
and Titanium Chlorides

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(11.5%  $\text{TiCl}_3$ ). (VI) (50%  $\text{KCl}$  + 50%  $\text{MgCl}_2$ )  $\rightarrow$   $\text{TiCl}_3$   
(8%) crosses the same boundary at  $390^\circ \text{C}$ . (VII) (40%  
 $\text{KCl}$  + 60%  $\text{MgCl}_2$ )  $\rightarrow$   $\text{TiCl}_3$  crosses field boundaries  
 $\text{MgCl}_2$  and  $\text{TiCl}_3$  at  $440^\circ \text{C}$  (6.7%  $\text{TiCl}_3$ ). (VIII) (92.5%  
 $\text{KCl}$  + 7.5%  $\text{TiCl}_3$ )  $\rightarrow$   $\text{KCl} \cdot \text{MgCl}_2$  crosses the field  
boundaries of  $\text{KCl}$ ,  $3\text{KCl} \cdot \text{TiCl}_3$  and  $\text{KCl} \cdot \text{MgCl}_2$  (30.5  
and 62%) at  $565$  and  $435^\circ \text{C}$ , respectively. (IX) ( $3\text{KCl}$   
 $\cdot \text{TiCl}_3 \rightarrow \text{KCl} \cdot \text{MgCl}_2$  (63%) crosses field boundary  
 $3\text{KCl} \cdot \text{TiCl}_3$  and  $\text{KCl} \cdot \text{MgCl}_2$  at  $480^\circ \text{C}$ . (X) (69%  $\text{KCl}$   
+ 31%  $\text{TiCl}_3$ )  $\rightarrow$   $\text{KCl} \cdot \text{MgCl}_2$  (65%) crosses the same  
boundary at  $416^\circ \text{C}$ . (XI)  $\text{KCl} \rightarrow (71\% \text{MgCl}_2 + 29\% \text{TiCl}_3)$   
crosses field boundaries of  $\text{KCl}$ ,  $3\text{KCl} \cdot \text{TiCl}_3$  at  $568^\circ \text{C}$   
(80%  $\text{KCl}$ ) and  $420^\circ \text{C}$  (56%  $\text{KCl}$ ). The above experimental  
data were used for plotting the  $\text{KCl}-\text{MgCl}_2-\text{TiCl}_3$  ternary  
system diagram as a projection of primary crystalliza-  
tion surfaces on the plane of a concentration triangle,

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and Titanium Chlorides

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as shown in Fig. 2. The crystallization surface is represented by six crystallization fields (three corresponding to original salts and three to compounds  $3KCl \cdot TiCl_3$  and  $KCl \cdot MgCl_2$  as well as variable composition phase A. The fields converge in four nonvariant points: three eutectic and one hypereutectic. Their characteristics are given. In their conclusions the authors indicate that the lowest melting alloys of the ternary system are in the vicinity of eutectic points  $E_2$  and  $E_3$  ( $380^\circ C$ ). The formation of a stable compound  $3KCl \cdot TiCl_3$  which is soluble in molten K, Mg, and Ti chlorides is confirmed. There are 2 figures; 1 table; and 5 references, 3 Soviet, 2 German.

ASSOCIATION: Leningrad Polytechnic Institute. Chair of Electrometallurgy of Non-Ferrous Metals (Leningradskiy politekhnicheskii institut. Kafedra elektrometallurgii tsvetnykh metallov)

SUBMITTED: May 20, 1959

Card 5/6

Ternary System of Potassium, Magnesium,  
and Titanium Chlorides

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SOV/149-60-1-17/27

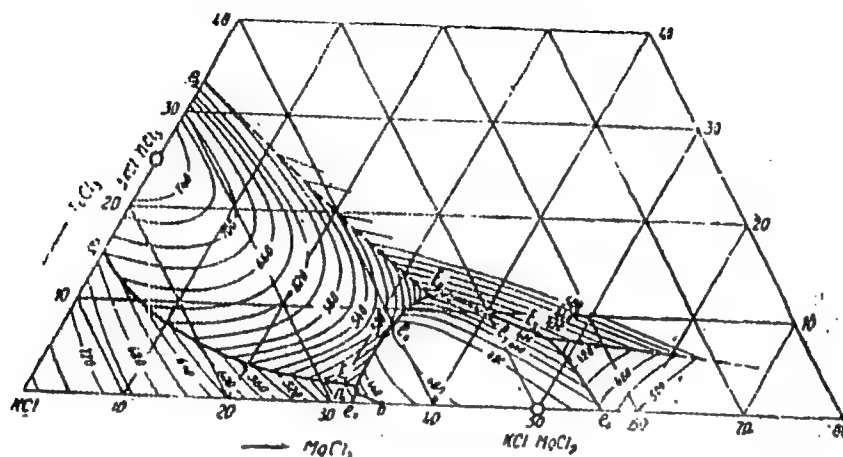


Fig. 2. Concentration triangle for  $KCl-MgCl_2-TiCl_3$  system with isotherms.

Card 6/6

80833

S/149/60/000/03/03/009

18.3100

AUTHORS: Baymakov, Yu.V., Kamenetskiy, M.V., Smirnov, V.V.

TITLE: Investigation Into Processes Occurring on Electrodes in Electrolytic Titanium Refinement

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, 1960,<sup>3</sup> No 3, pp 81 - 89  
A

TEXT: Studies on the crystallization of metal on the cathode in electrolytic refinement of titanium are still at a stage of preliminary research. Crystallization of titanium on the cathode is complicated by the  $2\text{TiCl}_3 + \text{Ti} \rightleftharpoons 3\text{TiCl}_2$  reaction developing on the surface of forming crystals. The authors investigated the preparation of melts containing  $\text{TiCl}_3$  and carried out analyses. The method described in Refs 5 and 6 was employed. The experiments were performed in a medium of purified argon on an installation shown in Figure 1. Results of the experiments are given in a table. The dependence of the current efficiency and the composition of the final electrolyte on the volume current density at  $800^\circ\text{C}$  is represented by a set of graphs. It appears that highest current efficiency is obtained if the melt contains 5 to 12%

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S/149/60/000/03/03/009

# Investigation Into Processes Occurring on Electrodes in Electrolytic Titanium Refinement

$TiCl_3$  (in g.equ). Higher temperatures cause increased current efficiency which attains its maximum within the range of  $800^\circ - 875^\circ C$ . Further raise of the temperature causes decreased current efficiency. Reactions on the electrodes and the balance of electrode processes were investigated. Values of the decomposition potentials for reactions of reduction and formation of titanium chloride at  $800^\circ C$ , calculated by M.V. Kamenetskiy (Ref 12) are given. If the equilibrium electrode potential of Cl is considered as a constant value, the most electronegative potential corresponds to the reaction of  $Ti^{2+}$  reduction. This leads to the conclusion on the consecutive course of anode and cathode reactions. To obtain a satisfactory course of the cathode process, a higher cathode current density is required as well as a relatively high  $Ti^+$  concentration in the melt ensuring the feed of the zone adjacent to the cathode. The reactions on the cathode and anode are illustrated by Figure 5. The effect of the volume current density was studied in a series of experiments. It was revealed that the amount of  $TiCl_3$  and  $TiCl_2$  contained in the volume of the electrolyte acted as a regulator to maintain a constant composition. As a consequence the part of the current density was revealed, whose optimum value

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S/149/60/000/03/03/009

Investigation Into Processes Occurring on Electrodes in Electrolytic Titanium Refinement

was 25 - 30 amp/l. It was established that highest current efficiency was observed if there was a noticeable  $TiCl_2$  concentration in the melt. To ensure a sufficient rate of  $TiCl_2$  formation melts with high activity of  $TiCl_3$  are recommended. Best current efficiency is obtained if the cathode current density is 0.8 - 2.5 amp/cm<sup>2</sup> and the anode current density is 0.05 - 0.1 amp/cm<sup>2</sup> at 800° - 850°C. The authors studied the effect of the electrolysis process of KCl -  $TiCl_3$  melts on the structure of cathode deposits, which was most satisfactory at a concentration of 4 - 10%  $TiCl_3$  in the initial melt, a volume current density of 25 - 50 amp/l, a cathode current density of 1 - 2.5 amp/cm<sup>2</sup> and a temperature of 800° - 850°C. There are 1 diagram, 1 table, 4 sets of graphs, 4 photographs and 14 references: 10 Soviet, 1 English and 3 German. WH

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Polytechnical Institute), Kafedra elektropirometallurgii (The Chair of Electropyrometallurgy)

SUBMITTED: July 21, 1959

Card 3/3

BAYMAKOV, Yu.V.; KAMENETSKIY, M.V.; CHERNY, F.

Equilibrium between titanium chlorides and titanium metal in  
molten potassium and sodium chlorides. Izv.vys.ucheb.zav.; tsvet.  
met. 3 no.2:102-107 '60. (MIRA 15:4)

1. Leningradskiy politekhnicheskii institut, kafedra elektropiro-  
metallurgii.

(Titanium—Electrometallurgy)

S/145/62/000/003/002/011  
A001/A101

AUTHORS: Kamenetskiy, M. V., Shevlyakova, L. I.

TITLE: Electric conductivity of binary systems consisting of sodium and titanium chlorides or potassium and titanium chlorides

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 3, 1962, 89 - 93

TEXT: The authors studied electric conductivity of binary systems used in electrolytical refining of titanium at 800 - 950°C in order to select an effective composition of electrolytes. The device used for resistance measurements was a conductivity meter with an operation range from  $10^{-2}$  to  $10^7$  ohm. Molybdenum and tungsten were used as materials for electrodes. The specific electric conductivity of the KCl-TiCl<sub>3</sub> system was measured in the concentration range from 0 to 38 mol.% TiCl<sub>3</sub>, and that of the NaCl-TiCl<sub>3</sub> system in the range from 0 to 30.8 mol.% TiCl<sub>3</sub>. Isotherms of specific electric conductivity of both systems are shown graphically at various temperatures and compared with data by Yu. K. Delimarskiy and R. V. Chernov. At a content of 25 mol.% TiCl<sub>3</sub> the isotherms show de-

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Electric conductivity of...

S/149/62/000/003/002/011

A001/A101

flections, which can be explained by formation in the systems of chemical compounds  $\text{Na}_3\text{TiCl}_6$  and  $\text{K}_3\text{TiCl}_6$ . With increasing  $\text{TiCl}_3$  content beyond 25 mol.%, electric conductivity of the melt drops considerably, in view of its dilution by poorly conducting titanium trichloride. Relative temperature coefficients of specific electric conductivity of both systems were calculated and plotted in graphs versus  $\text{TiCl}_3$  content. The curves of both systems pass through maxima at 25 mol.%  $\text{TiCl}_3$ , confirming thereby the formation of the chemical compound in the melt. It was found that the electric conductivity data of the melts studied satisfied Frenkel's formula:

$$\gamma = A e^{-\frac{u}{KT}}$$

Analytically, using this formula, and graphically the authors determined activation energy of the electric conductivity process at a temperature of  $875^\circ\text{C}$  and plotted the corresponding curves versus  $\text{TiCl}_3$  content, which also reveal maxima at its 25 mol.% content. There are 4 figures and 1 table.

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Polytechnic Institute) Kafedra elektroprometallurgii (Department of Electric Pyrometallurgy)

SUBMITTED: January 6, 1962

Card 2/2



S/826/62/000/000/002/007  
D408/D307

AUTHORS: Kamenetskiy, M.V., Kostyukov, A.A. and  
Korchakov, V.A.

TITLE: The ternary system of sodium, titanium  
and barium chlorides

SOURCE: Fizicheskaya khimiya rasplavlennykh soley  
i shlakov; trudy Vses. soveshch. po fiz.  
khimii raspl. soley i shlakov, 22 noyabrya  
1960 g., Moscow, Metallurgizdat, 1962, 60-62

TEXT: The authors studied the phase diagram of the  
ternary system  $\text{NaCl--TiCl}_3\text{--BaCl}_2$  in the region of compositions  
suitable for the electrolytic production of titanium, because the  
addition of  $\text{BaCl}_2$  to the system  $\text{NaCl--TiCl}_3$  (in order to prevent  
separation of the electrolyte components), alters the physico-  
chemical properties of the electrolyte. The cited binary system  
was also studied, up to 35.5 mol %  $\text{TiCl}_3$  content, because of the  
discrepancies in the data concerning this system obtained by

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The ternary system ...

S/826/62/000/000/002/007  
D408/D307

Kamenetskiy et al. The investigations showed that the binary system eutectic contains 23 mol %  $\text{TiCl}_3$  and melts at  $550^\circ\text{C}$ ; the ternary eutectic has the composition  $\text{TiCl}_3$  20.8,  $\text{BaCl}_2$  14.2, and  $\text{NaCl}$  65.0 mol % and melts at  $540^\circ\text{C}$ . There are 3 figures.

ASSOCIATION: Leningradskiy politekhnicheskiy institut  
(Leningrad Polytechnic Institute)

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S/826/62/000/000/001/007  
D408/D307

AUTHORS: Kamenetskiy, M.V., Kostyukov, A.A. and  
Hsiao Te-Ch'uang

TITLE: The ternary system of potassium, barium, and titanium chlorides

SOURCE: Fizicheskaya khimiya rasplavlennykh soley i shlakov; trudy Vses. soveshch po fiz. khimii raspl. soley i shlakov, 22 - 25 noyabrya 1960 g., Moscow, Metallurgizdat, 1962, 54 - 59

TEXT: The authors studied the phase diagram of the system  $KCl-TiCl_3-BaCl_2$  in the region of compositions suitable for the electrolytic production of titanium up to 40 mol %  $TiCl_3$ , at atmospheric pressure, because the addition of  $BaCl_2$  to the system  $KCl-TiCl_3$ , (in order to prevent separation of the electrolytic components), alters the physico-chemical properties of the electrolyte. The cited binary system was also studied, up to 41.6 mol %  $TiCl_3$  content, because of the existence

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D408/D307

The ternary system ...

of discrepancies in the phase diagrams obtained for this system by various authors. From the investigation of the binary system it was found that the eutectic contained 15 mol %  $\text{TiCl}_3$  and melted at  $676^\circ\text{C}$ , the compound  $3\text{KCl} \cdot \text{TiCl}_3$  melted at  $760^\circ\text{C}$ , and the compound  $2\text{KCl} \cdot \text{TiCl}_3$  melted incongruently. A peritectic transition occurred at 40%  $\text{TiCl}_3$  and  $580^\circ\text{C}$ , in accordance with the reaction  $\text{K}_2\text{TiCl}_5 \rightleftharpoons \text{liquid} + \text{K}_3\text{TiCl}_6$ . The crystallization surface in the investigated region of the ternary system is represented by the four crystallization fields  $\text{KCl}$ ,  $\text{BaCl}_2$ ,  $\text{K}_3\text{TiCl}_6$ , and  $\text{K}_2\text{BaCl}_4$ , and the triangulating secants are  $\text{K}_3\text{TiCl}_6$ -- $\text{K}_2\text{BaCl}_4$  and  $\text{K}_3\text{TiCl}_6$ -- $\text{BaCl}_2$ , which divide the system into three secondary systems:  $\text{KCl}$ -- $\text{K}_3\text{TiCl}_6$ -- $\text{K}_2\text{BaCl}_4$ ,  $\text{K}_3\text{TiCl}_6$ -- $\text{K}_2\text{BaCl}_4$ -- $\text{BaCl}_2$ , and  $\text{K}_3\text{TiCl}_6$ -- $\text{BaCl}_2$ -- $\text{TiCl}_3$ . The latter system was not investigated since it encompasses the region of melts difficult to obtain at normal pressure. In the portion of the phase diagram which was studied, the lowest melting point,  $600^\circ\text{C}$ , occurs in the region of the ternary eutectic points having compositions ( $\text{TiCl}_3$  4.6,

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The ternary system ...

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KCl 75.1, and BaCl<sub>2</sub> 20.3 mol %), and (TiCl<sub>3</sub> 7.8, KCl 65.6, and BaCl<sub>2</sub> 26.6 mol %). It was confirmed that the compound K<sub>3</sub>TiCl<sub>6</sub> is stable in molten KCl and BaCl<sub>2</sub>. There are 6 figures.

ASSOCIATION:

Leningradskiy politekhnicheskii institut  
(Leningrad Polytechnic Institute)

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KAMENETSKIY, M.V.; SHEVLYAKOVA, L.I.

Electroconductivity of binary systems of sodium and titanium  
chlorides and potassium and titanium chlorides. Izv.vys.ucheb.  
zav.; svet.met. 5 no.3:89-93 '62. (MIRA 15:11)

1. Leningradskiy politekhnicheskii institut, kafedra  
elektropirometallurgii.

(Systems (Chemistry)) (Chlorides--Electric properties)

KAMENETSKIY, S.

Increase of the service life of 43LK<sub>2</sub><sup>B</sup> picture tubes. Radio  
no.2:38 F '61. (MIRA 14:9)  
(Television--Picture tubes)

KAMENETSKIY, S.

Reconditioning of 431K2B kinescopes. Radio no.6:44 Je '62.  
(MIRA 15:5)  
(Television—Picture tubes)



KAMENETSKIY, S., kand.tekhn.nauk

We will raise the quality of heat insulation. Na stroi. Ros. 3  
no.1130-31 Ja '62. (MIRA 16:5)  
(Insulating materials)

Li

Kamenetskiy, S. A. (Translator)

RAYLEIGH, John William Strutt; . . . USPENSKIY, P. N. [translator];  
KAMENETSKIY, S. A., [translator]; RYTOV, S. M., redaktor

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Perevod s 3. angliiskogo izd. P. N. Uspenskogo i S. A. Kamenetskogo.  
Izd. 2., pod red. i s predisl. S. M. Rytova. Moskva, Gos. izd-vo  
tekhniko-teoret. lit-ry, 1955. (MLRA 9:3)  
(Sound) (Vibration) (Waves)

TIMOSHENKO, Stepan Prokof'yevich, prof.; YANG, D.Kh. [Young, D.H.], prof.;  
PANOVKO, Ya.G. [translator]; KAMENETSKIY, S.A., red.; GAVRILOV,  
S.S., tekhn.red.

[Vibration problems in engineering] Kolebaniia v inzhenernom  
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(MIRA 12:10)

(Vibration)

(Mechanics, Applied)

POLAK, Lev Solomonovich; GRIGOR'YAN, A.T., red.; ~~KAMNETSKIY, S.A., red.;~~  
TUMARKINA, N.A., tekhn.red.

[Variational principles in mechanics, their development and  
applications in physics] Variatsionnye printsipy mekhaniki,  
ikh razvitie i primeneniia v fizike. Moskva, Gos.isd-vo fiziko-  
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(Mechanics, Analytic) (Calculus of variations)  
(Physics)

ZAZOVSKIY, F.Ia.; KAMENETSKIY, S.G.

Pressure restoration on well bottoms in thinned oil flow. Nefteprom.  
delo no.946-12 '65. (MIRA 18:10)

1. Vassoyusnyy neftegazovyy nauchno-issledovatel'skiy institut.

KAMENETS'KIY, S. I.

Chemical Abstracts  
May 25, 1954  
Biological Chemistry

(2)  
A method for the determination of nicotinic acid in blood. S. I. Kamenets'kiy (Ukrain. Sci. Research Inst. Nutrition, Kiev). *Ukrain. Biokhim. Zhur.* 20, 363-8 (in Russian, 368-70) (1948).—This method does away with the use of NaCN. To 10 ml. blood add 15 ml. H<sub>2</sub>O and allow to stand for 5 min. Add 10 ml. of a 10% soln. of Na tungstate and after 5 min. 10 ml. of 0.07*N* HCl. Shake occasionally for 45 min. and filter; to the filtrate add 10*N* NaOH, 5 ml. for every 30 ml. of filtrate. Heat for 1.5 hrs. on a water bath. Neutralize to phenolphthalein with 36% HCl, and bring to pH 4.5-5.0 with 2% HCl, with bromophenol blue and bromocresol purple as indicators. Add water to bring the vol. to 1/3 that of the filtrate taken for hydrolysis and heat 10 ml. to 75-80° on a water bath together with 1 ml. of rhodanine bromide (I) soln. Cool to room temp. and add 2.5 ml. of a 5% soln. of methyl-*p*-aminophenol (II). The I soln. contains CaCO<sub>3</sub> which produces a more intense and stable color. Standards are prepd. with 0.1, 1.0, 2.0, and 3.0  $\gamma$  nicotinic acid (III) and the color is read in a photoelec. colorimeter after 45 min. at room temp. One can det. 25-30  $\gamma$  III in 1 ml. of the blood. Aniline can be used instead of II.  
Werner Jacobson

KAMENETSKIY, SH. E.

U.S.S.R. Medicine - Dystrophy  
Excluded

Var' pr 49

"The Use of Products of the Oxygen Hydrolysis of Protein in the Treatment of Dystrophic Conditions," Prof M. M. Gubergits, Head of Preliminary Therapeutic Clinic, Head of Clinical Experimental Dept, Active Man, Acad Sci Ukrainian SSR, A. V. Levin, Sh. E. Kamenetskiy, Preliminary Therapeutic Clinic, Kiev Ord of Red Banner of Labor Med Inst in Acad A. A. Bogomolets, Clinical Experimental Dept, Ukrainian Nutrition Inst, 5 pp

"Klin Med" Vol XLVII, No 4

Injected a solution of amino acids and polypeptides, evolved by A. V. Levin from the dissolution of casein, into five dogs with dystrophy. On obtaining positive results with no complications, administered the solution to human patients. Of 46 adult patients treated for alimentary toxic dystrophy, 36 showed positive results and eight, no improvement. Tabulated results obtained from two of the experimental dogs, and analyzed the change in protein content of the blood in two patients, discussing their case histories in detail. Tabulated data on two control cases. Results of the treatment appear quite favorable.

PA 66/49783

<sup>T</sup>  
KAMENELSKIY, S.I.

Metabolism of vitamin C and nicotinic acid in gastroduodenal  
ulcers. Klin. med., Moskva 18 no.10:87-88 Oct 50. (CLML 20:4)

1. Of the Department of Propedeutic Therapy (Head--Prof. M.M.  
Gubergits, Active Member of the Academy of Sciences USSR), Kiev  
Order of the Red Banner of Labor Institute imeni Academician A.A.  
Bogomolets.



1. KAMENETS'KIY, S. I.; BRANINS'KIY, B. M.; HEYKHMEN, L. Z.; HEL'MAN, N. Ya.; REIDERMAN, M. I.
2. USSR (600)
4. Vitamins
7. Content of certain vitamins in the blood and urine in grippe and in acute catarrh of the upper respiratory tract. Medych. zhur. 22, No. 1, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

KAMENETSKIY, S.I., dotsent; MIKUNIS, R.I., kandidat meditsinskikh nauk

Clinical aspects of acute hepatic dystrophy in Botkin's disease.  
Vrach.delo no.11:1201-1203 N '56. (MIRA 10:3)

1. Kafedra fakul'tetskoy terapii (zaveduyushchiy - professor  
B.S.Shklyar) Vinnitskogo meditsinskogo instituta.  
(HEPATITIS, INFECTIOUS)

Country : USSR  
 Category= : Human and Animal Physiology. I  
 Metabolism. Vitamins.  
 Abs. Jour. : Ref Zhur-Biol., No 23, 1958, 106836  
 Author : Kamenetskiv, Sh. E.  
 Institut. : Fakul'tetskaya terapevticheskaya klinika (zav.-prof. B.S.\*\*\*  
 Title : Providing Thiamin for the Organism of Ulcer  
 Patients.

Orig. Pub. : Vrach. Delo, 1958, No 6, 611-614

Abstract : Healthy people and patients with ulcers who received 2 mg of vitamin B<sub>1</sub> daily, were internally injected with an additional 10 mg dose of vitamin B<sub>1</sub>. Before the injection was given and 10, 20, 30, and 60 minutes after the injection, the contents of free and bound B<sub>1</sub>, of pyruvic acid, and of bisulfite-binding compounds of the blood and of the urine were determined. In the blood of healthy people, the content of general B<sub>1</sub> before it was additionally supplied to them,

Card: 1/3  
 \*\*\*shklyar) Vinnitskogo meditsinskogo instituta.

Country : USSR  
 Category : Metabolism. Vit. min.  
 Abs. Jour. : Ref Zhur-Biol., No 23, 1950, 106236

Author :  
 Institut. :  
 Title :

Orig. Pub. :

Abstract :  
 (cont) amounted to (on the average in 8 percent) 9.90, in patients, to 10.12; free B<sub>1</sub> amounted to 3.59 and 4.19, respectively, and bound B<sub>1</sub> to 6.4 and 5.91, respectively. In patients, the fluctuations rate was significantly higher. There was no connection between the blood's and the urine's B<sub>1</sub> content before and after it was additionally supplied. In contrast to healthy people, the concentration of free B<sub>1</sub> in patients did not increase after it was supplied to them.